PROJECT

publications

Terri Julian

CH-47

(256) 882-5268

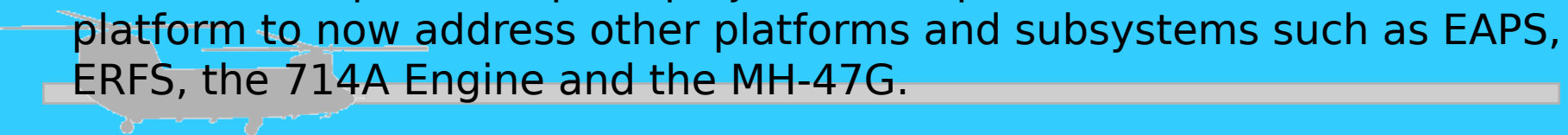
The CH-47 Tech Pubs Project Alternative

In September 2000, the Project Manager (PM) for the CH-47 Cargo Helicopter made a decision to segregate the development and sustainment of technical publications supporting the CH-47F Improved Cargo Helicopter. Cost and quality were the driving factors in the decision.

The Cargo Helicopter PMO, in partnership with AMCOM, CECOM, USAALS and other government agencies, defined an alternate strategy of “In-Sourcing” the technical publication development process to ensure quality, timeliness, and value. This strategy represents a significant change to the conventional publications development process.

The Publications Project is an Army-led, government/contractor team working together to develop and integrate all Cargo Helicopter tech pubs projects including full functionality IETMs, legacy source data revisions, and sustainment of all source data.

The basic scope of the pubs project has expanded from the CH-47 platform to now address other platforms and subsystems such as EAPS, ERFS, the 714A Engine and the MH-47G.



Pubs Project Organization - Huntsville

Project Management Team

Cargo PMO
- Hank Humphries

AEPCO
- Hudson Bragg
- Edwin Rodriquez

Avion
- Renee McDaniel

3D Modeling

RDEC
- Terri Mullins
- Nathan Kennedy
- Susan Solomon

MACS-D/Avionics

AEPCO
- Ruben Valle

CECOM/MACS-D
- Tom Porter
- Mike Huessner
- Dwight Deatheridge
- Fred Pitre
- Gerry Boyan
- John Lukianov
- Jim Cornell

Data Development Team

AMCOM
- Jay Appleton
- Lucretia Roberts
- Harold Stevens
- Ray Hudson
- Mary Jo Burnell

AEPCO
- John Smalley
- Paul Haines
- Chris Taylor
- Wayne Bubnick
- Ruben Valle
- Mike Bradford
- Sonny Austin
- Donna Bush
- Jeremy Blanchette
- Jeff Confer
- Jerry Witte
- Dwain Pannell

Avion
- Bryan Wood

Data Integration Team

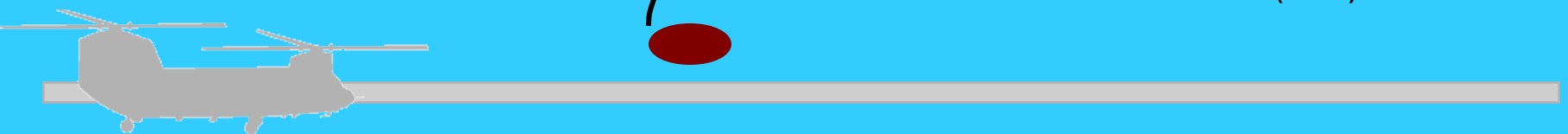
AMCOM
Terri Julian
Rich Gramley
Michael Boeking

AEPCO
Pat Crabtree
Jim Tietjen

Westar
Garien Storm
April Zink
Corky King
Rich Leonard
Pam Storm
Stephanie Willman
Teresa Alexander
Bob Hastie

Pubs Project Facility

7500 Memorial Parkway South
Suite 315A
Huntsville, AL 35802
Phones (256) 881-6110
Fax (256) 881-6112



Pubs Project Consortium

GOVERNMENT

AMCOM
ASAALT
Cargo Helicopter PMO
CECOM
DCMA
DES
LIA
LOGSA
LSF
PEO Aviation
RDEC
SMDC
Tobyhanna Army Depot
USAALS

CONTRACTORS

ADCS
AEPCO
ARINC
Auto-trol
Avion
Boeing Long Beach
Boeing Philadelphia
Dayton T. Brown
DCL
Honeywell
ISS
Litton
Mevatec
Rockwell Collins
SAIC
Sigmatech
Sverdrup
UAH
Westar
WestWind

CH-47 Tech Pubs: Program Goals

- Distribute revised tech pubs to support D-model users.
  - Correct legacy data.
  - Revise and convert D-model maintenance publications and RPSTL to electronic format.
- Update DMWRs with existing AEDs and Recap analysis AEDs.
- Integrate ECP/subsystem tech pubs data.
- Develop data structure, naming conventions and business processes to support interchangeability with Maintenance Management Systems.
- Develop and distribute IETMs for D- and F-models.

CH-47 Publications Project Scope

Initial Project Components:

D-Model Data Revision
- TM 55-1520-240-23
- TM 55-1520-240-23P

F-Model IETM Including:
- TM 55-1520-240-23
- TM 55-1520-240-23P
- TM 55-1520-240-T
- TM 11-1520-240-23
- TM 11-1520-240-23P
- Digital Graphics Conversion

MACS-D - 40 Sets CECOM TMs

Current Project Components:

D-Model Data Revision
- TM 55-1520-240-23
- TM 55-1520-240-23P
- TM 55-1520-240-T
- TM 55-1520-240-PM
- TM 55-1520-240-PMD
- TM 55-1520-240-BD
- TM 55-1520-240-Shipping
- Provisioning Master Record

EMD Supplements
- TM 55-1520-240-23
- TM 55-1520-240-T
- TM 11-1520-240-23

EMD Data Specification/Review
- TM 55-1520-240-23P
- TM 11-1520-240-23P

- Provisioning Master Record
- Training Coordination

Pubs Development/Verification/Integration
- AMAC Data Structure Coordination
- ALE-47
- APX-100
- DESU (APU Control)
- EAPS/MEAPS
- Dig Map
- TM 55-1520-240-10
- TM 55-1520-240-CL
- TM 55-1520-240-MTF
- CFAT
- 714 Engine
- Phase Maintenance Work Package Demo
- MTF Procedure Guide
- Phase Maintenance Daily PDA Demo

F-Model IETM Including:
- TM 55-1520-240-23
- TM 55-1520-240-23P
- TM 55-1520-240-T
- TM 11-1520-240-23
- TM 11-1520-240-23P
- TM 55-1520-240-PM
- TM 55-1520-240-PMD
- TM 55-1520-240-BD
- TM 55-1520-240-Shipping
- Digital Graphics Conversion
- Troubleshooting Format Revision

ODC/HAZMAT
- D-Model
- F-Model
- Process Revision/MOA

DMWR/Recap
- PDF
- SGML

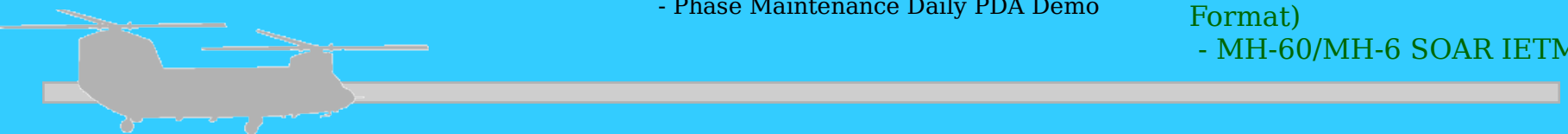
3D Modeling
- MACS-D
- D-Model
- F-Model

JCALS

AIT

MACS-D - 40 Sets CECOM TMs
- Data Rev AN/APR-39A

Planning Outlook –
- MH-47E IETM (38784 Format)
- MH-47G IETM (40051A Format)
- MH-60/MH-6 SOAR IETMs



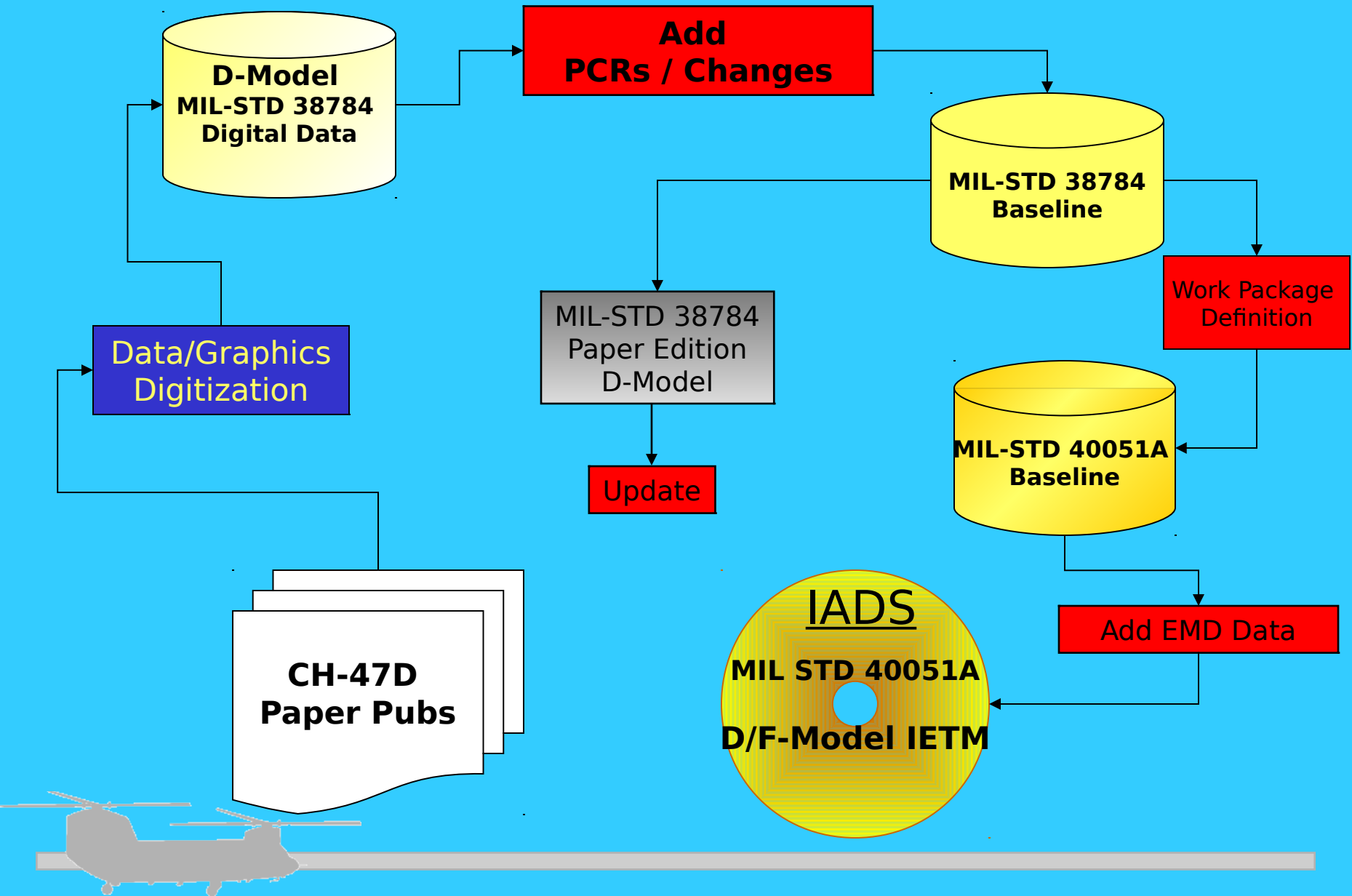
Product & Data Deliveries to Date

- Ft. Campbell PM/PMD Print (Jan 2003)
- Swash Plate Lubrication Video – Final Draft (Nov 2002)
- PM/PMD 400 hour Phase Project – (Oct 2002)
- Initial Pubs/Training Data Exchange (Oct 2002)
- RPSTL Start of Work (Sept 2002)
- 714A Engine DMWR RPSTL Update – (Aug 2002)
- -23 D-Model Update Release – (July 2002)
- Data Delivery to Boeing AMAC – SGML Files (July 2002)
- Phase Work Package Draft – (June 2002)
- MTF Maneuver Guide – (May 2002)
- CFAT Revision (April 2002)
- Data Delivery to TBE – Phase Daily PDA Demo (April 2002)
- Data Delivery to Boeing AMAC – SGML Files (March 2002)
- D-Model RPSTL Update w/ New Graphics Released (Feb 2002)
- F-Model EMD Supplements Verified/Revised (Feb 2002)
- Initial DMWR Update Completed (Nov 2001)

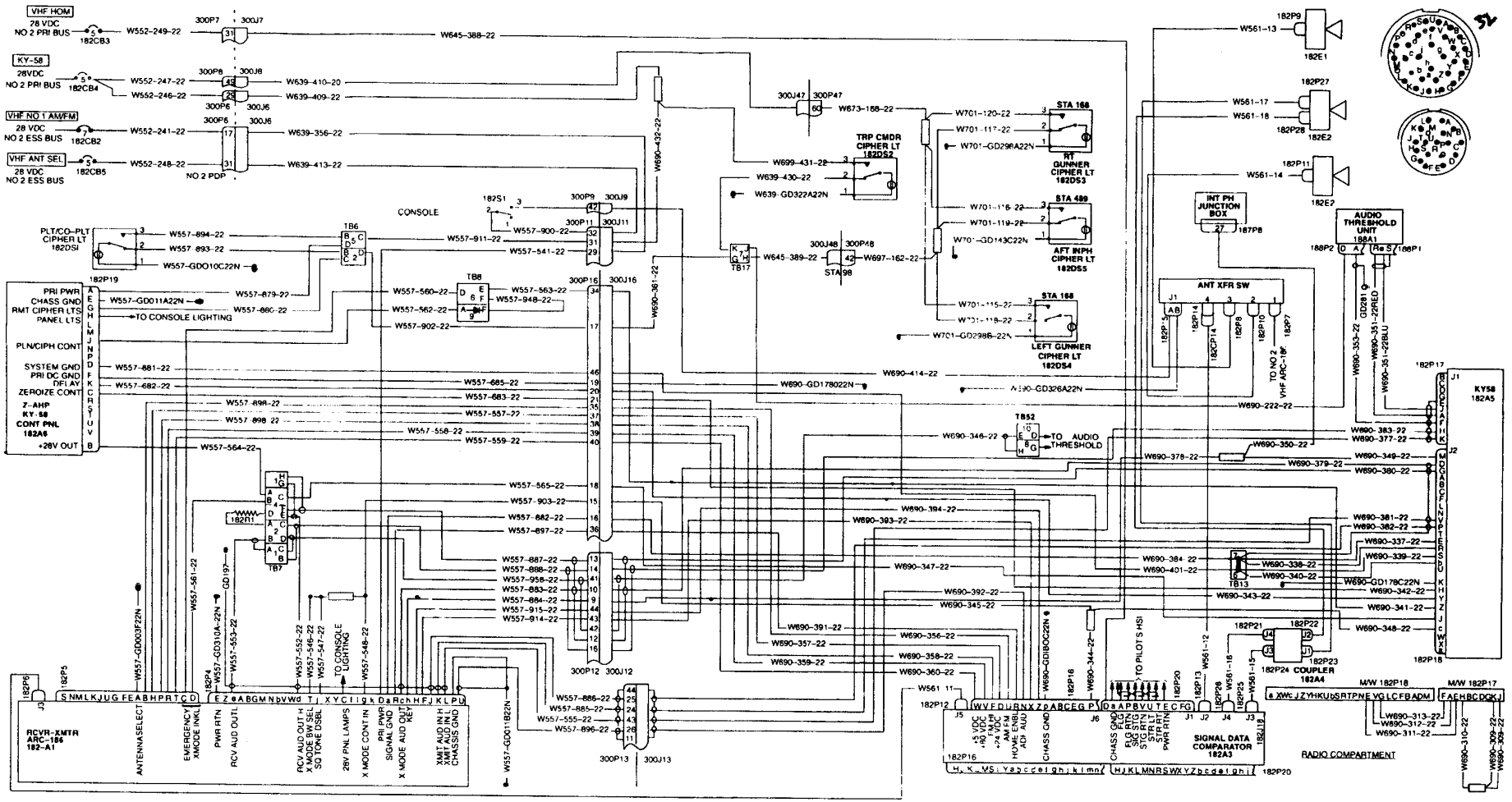
Data Handling & Development Tools

CONTENT	**3D DATA**	**2D GRAPHICS**	**TEXT & TABLES**	**PMR DATA**	**LAMM Schematics**
Type	AVI, JPG	CGM	SGML	CCSS	CGM, JPG
Developed	CAD, MicroStation	Auto Trol	Arbor Text	CCSS Power Log	CAD, MicroStation
Storage	SourceSafe	SourceSafe	SourceSafe	CCSS SQL Server	SourceSafe
Integration	Manual IADS	IADS	IADS	Manual IADS	Manual IADS
Display	I-Move IADS	Zoom View IADS	IADS	Paper / IADS RPSTL	IADS
Revision	Replace File	Replace File	Local Edit	Refresh Database	Local Edit
Revised by	RDEC	PM / IMMC	PM / IMMC	IMMC	RDEC

IETM Development Process CH-47D/F



Existing Format Wiring Diagram



SWCH4716

Figure FO-7 VHF AM/FM RADIO SET AN/ARC-186 #1 and #2 WIRING DIAGRAM (SHEET 1 of 2)

IETM-Format Wiring Diagram

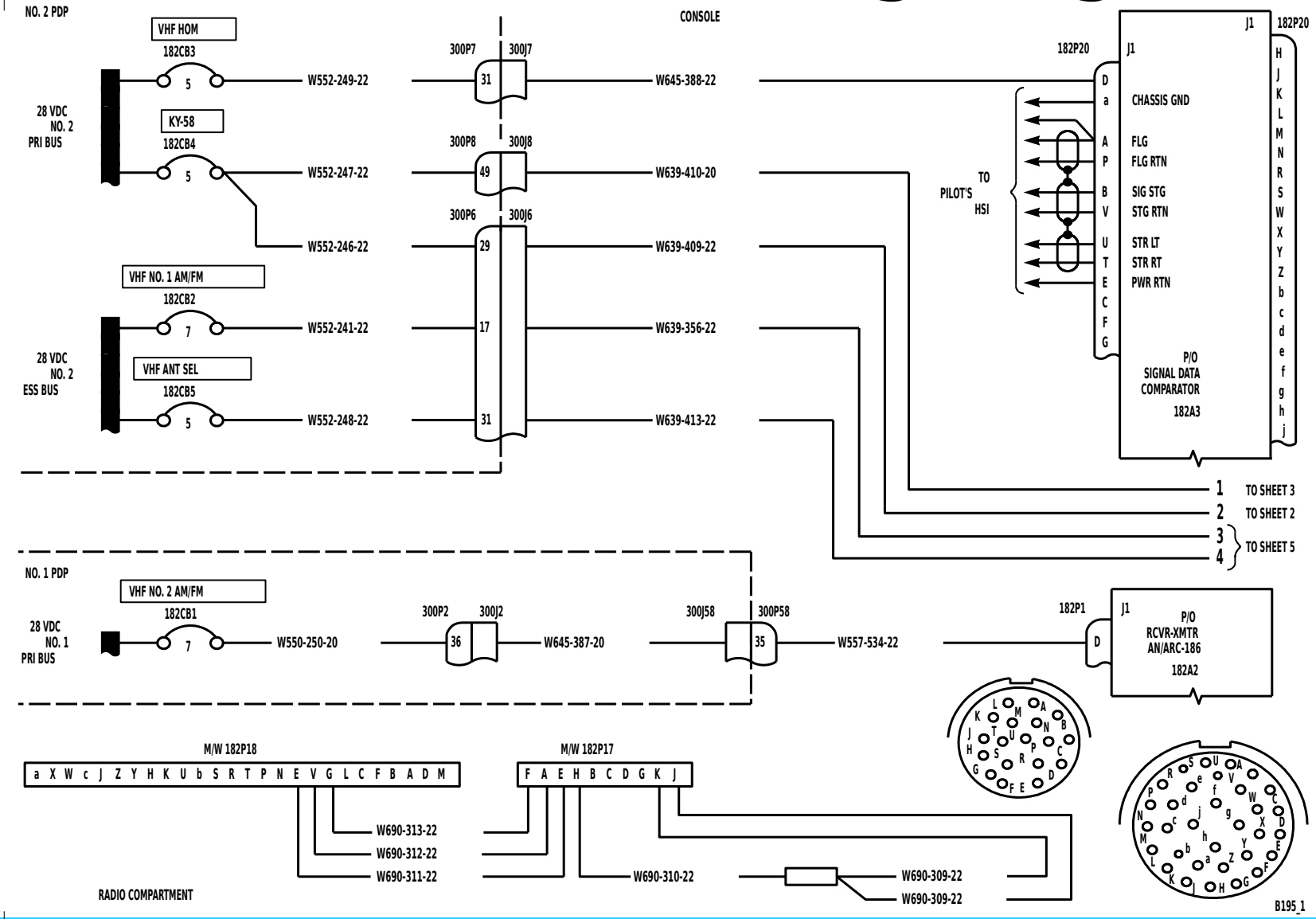


FIGURE FO-7. VHF AM/FM RADIO SET AN/ARC-186 #1 AND #2 WIRING DIAGRAM (SHEET 1 OF 7)

IETM-Format Wiring Diagram

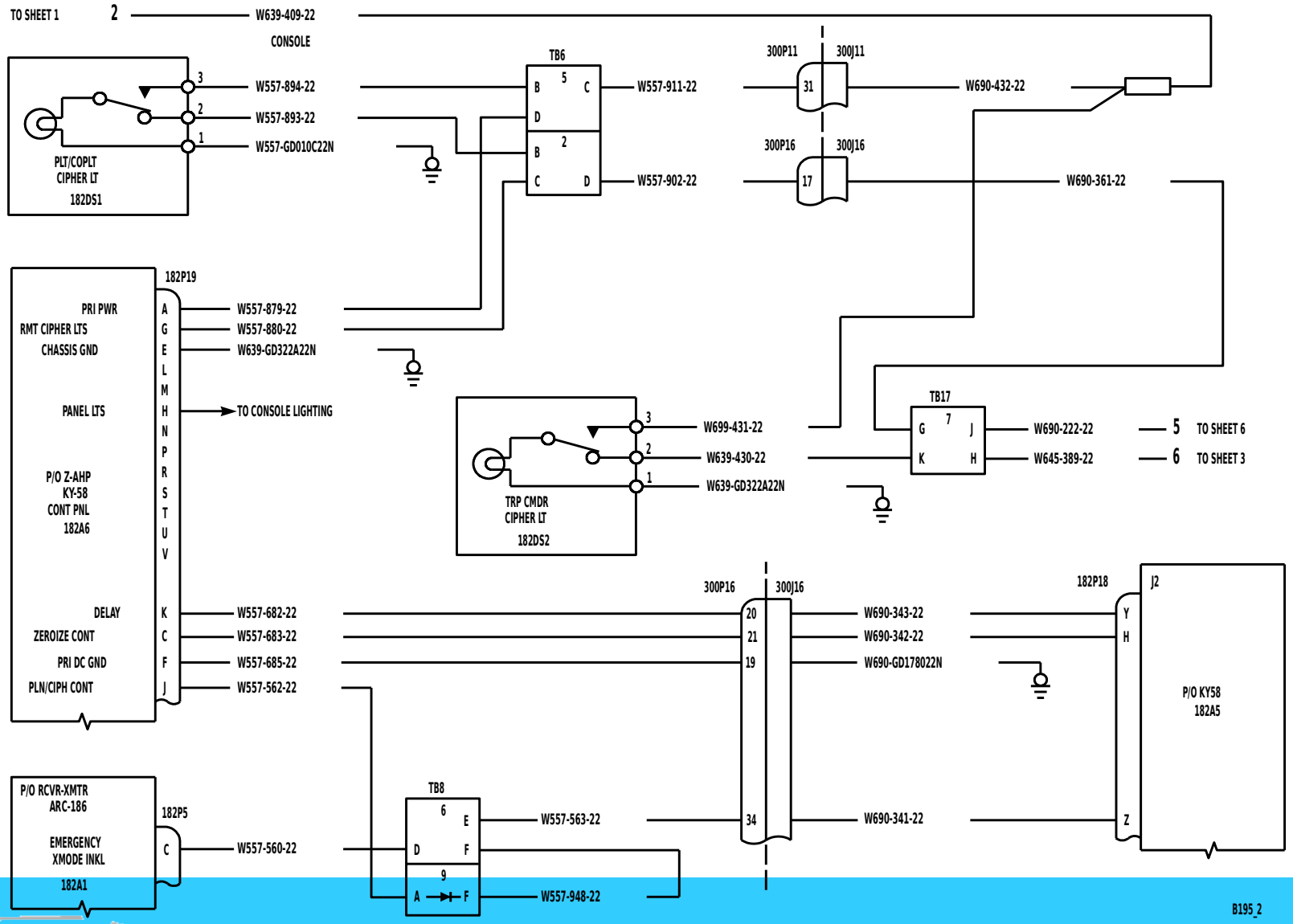
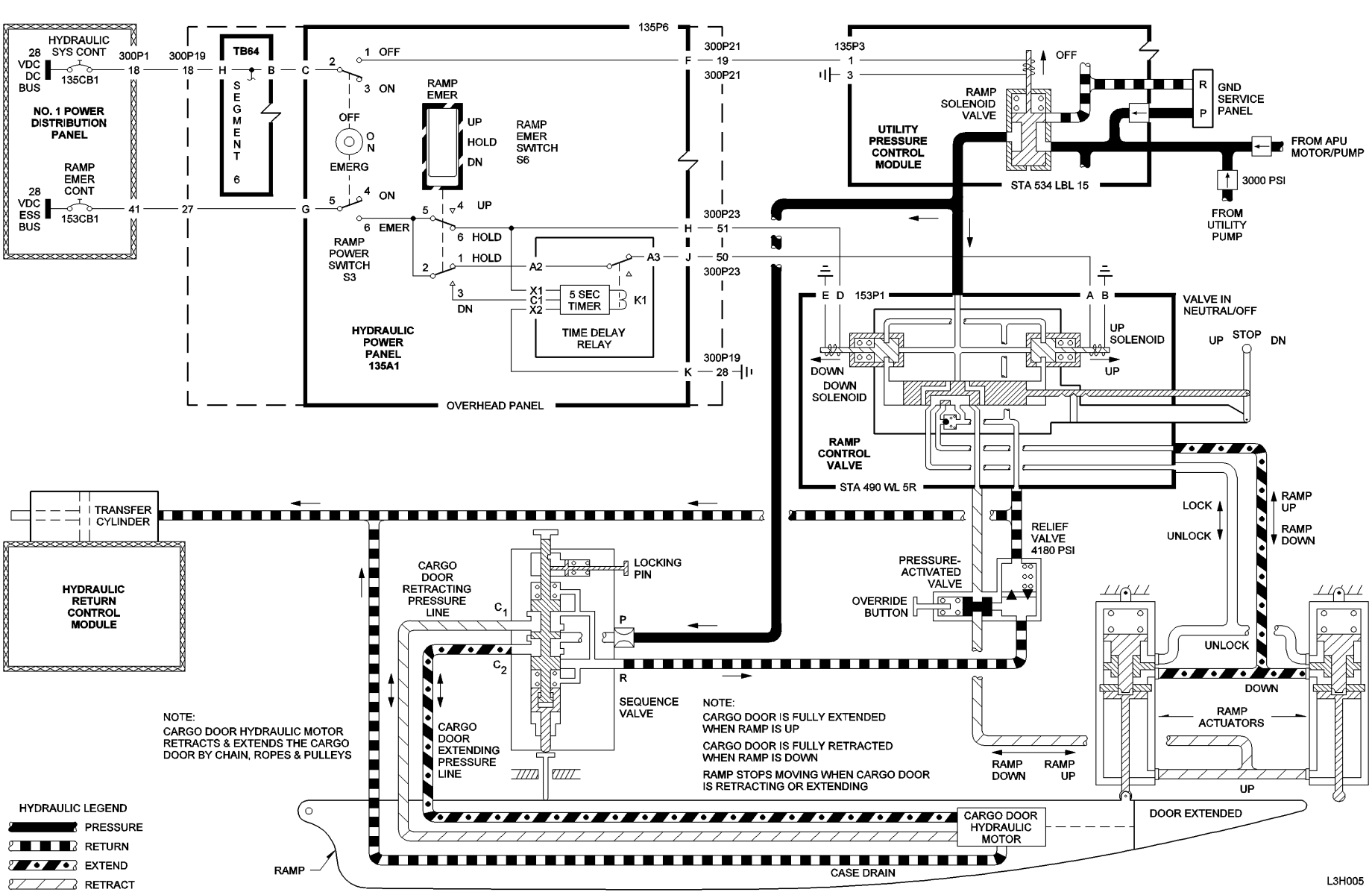


FIGURE FO-7. VHF AM/FM RADIO SET AN/ARC-186 #1 AND #2 WIRING DIAGRAM (SHEET 2 OF 7)

Purpose of LAMM Schematics

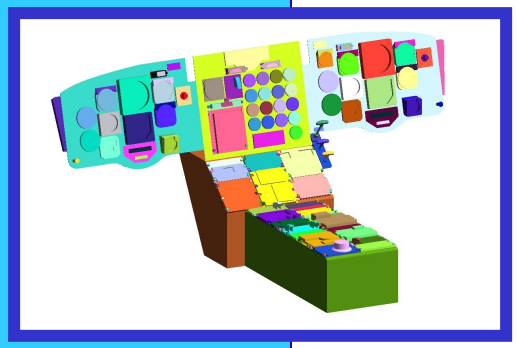
- System-oriented and shows all interfaces between systems and its functionality
- Shows the integration between hardware, software, controls & indication
- Well known in the commercial airline industry and embraced by people in various fields
  - Including technicians, pilots, training instructors and engineers
- Establish an accurate relationship between a system malfunction and a defective Line Replaceable Unit (LRU) thus reducing maintenance time and cost

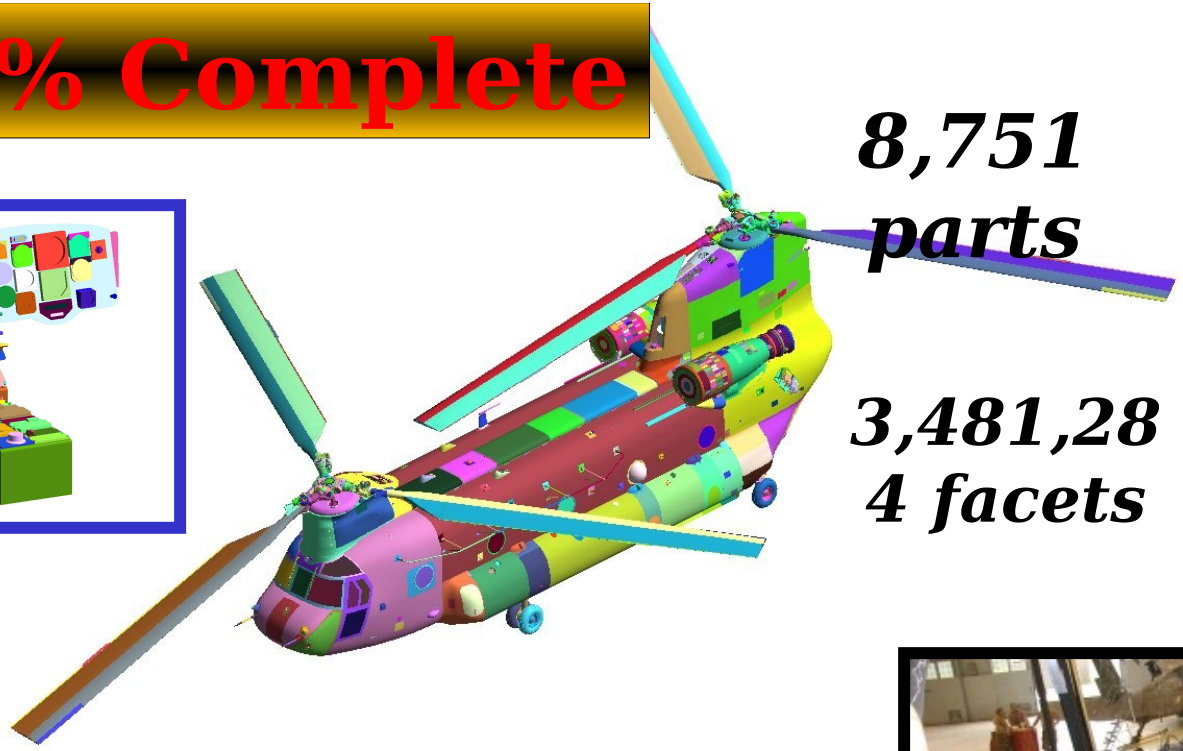
LAMM Schematics



Status of the CH-47 3D Model Development

100% Complete





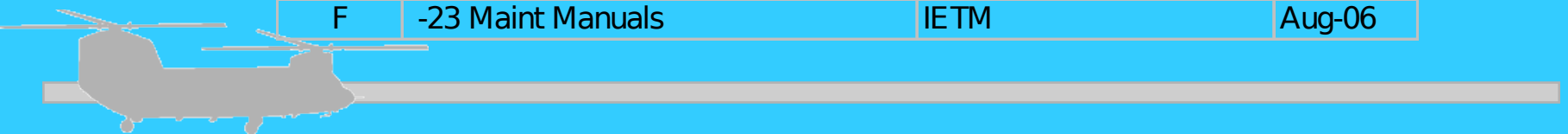
8,751 parts

3,481,284 facets

CH-47Model Applications

Pubs Project Product Release Schedule

Model	Product	Media	Date
D	200/400 Hour Phase PM/PMD	Paper & PDF	Jan-03
D	MWO EAPS Short Rails	Paper	Jan-03
D	RPSTL Revision w/EAPS	Paper & IETM	Jan-03
	714A Engine PMR Update	M&N Cards	Feb-03
D	Hydraulics Lamm Schematics	IETM	Feb-03
	MH-47 Pubs & RPSTL Contract	N/A	Feb-03
D	PM/PMD	Paper & PDF	Feb-03
D	Shipping Manual	IETM	Feb-03
	Blade Tiedown Procedures	Animated CD/IETM Task	Mar-03
D	Recap Airframe DMWR	SGML & Paper	Mar-03
	ALE-47 RPSTL & -23 Rev	Paper & PDF	Jun-03
	ERFS IETM Rev	IETM	Jun-03
D	-23 Maint Manuals Rev 1 w/ALE-47	Paper & PDF	Jul-03
D	Troubleshooting	Paper & PDF	Jul-03
	Artwork Classification	N/A	Aug-03
	714A Engine RPSTL	IETM	Oct-03
	MACS-D	IETM	Oct-03
	714A Engine Rev	IETM	Jan-04
D	-23/P/T Maint Manuals	IETM	Jun-04
D	Battle Damage	IETM	Jul-04
E	-23 Maint Manuals	Paper & IETM	Sep-05
G	-23/P/T Maint Manuals	IETM	Sep-05
F	11 Series -23/P	IETM	Aug-06
F	-23 Maint Manuals	IETM	Aug-06



What we've learned (so far).

- Make sure you can actually access and use the data you think you own.
- Be as precise as possible defining your data format requirements and as flexible as possible defining your output specifications.
- Understand the skills required to accomplish each segment of your process and apply your labor resources accordingly.
- When you find mistakes, correcting the source problem is better in the long run than working around your errors.
- Everything is iterative.
- Sometimes, enthusiasm and optimism will get you

Summary

- Our Mission is to develop and integrate Chinook publications projects and to assist other publications developers as requested.

- Our Objectives and Milestones focus on product development and delivery.

- Our Project is planned and staged to ensure quality and efficiency.

- We have formalized our business processes and we continue to refine them.

- We are on-schedule and on-budget through January 2003, over two years into the project.

- Our products are demonstrating superior quality.

- Our efficiency will save the government millions on the development and maintenance of the CH-47 technical